

Claim Listing

This listing of claims will replace all prior versions and listings of claims in the application:

1 - 63: (cancelled)

64. (currently amended) An pET-type expression vector optimized for use in E. coli cells comprising a first nucleic acid sequence encoding a peptide extension ~~for enhancing the solubility and proper folding of a protein or polypeptide of interest~~, wherein the encoded peptide extension is selected from the group consisting of: Peptide T7C (SEQ ID NO: 5), Peptide T7B (SEQ ID NO: 6), Peptide T7B1 (SEQ ID NO: 7), Peptide T7B2 (SEQ ID NO: 8), Peptide T7B3 (SEQ ID NO: 9), Peptide T7B5 (SEQ ID NO: 11), Peptide
10 T7B6 (SEQ ID NO: 12), Peptide T7B7 (SEQ ID NO: 13), Peptide T7B8 (SEQ ID NO: 14), Peptide T7B9 (SEQ ID NO: 15), Peptide T7B10 (SEQ ID NO: 16), Peptide T7B11 (SEQ ID NO: 17), Peptide T7B12 (SEQ ID NO: 18), Peptide T7B13 (SEQ ID NO: 19), Peptide T7A1 (SEQ ID NO: 21), Peptide T7A2 (SEQ ID NO: 22), Peptide T7A3 (SEQ ID NO: 23), Peptide T7A4 (SEQ ID NO: 24) and Peptide T7A5 (SEQ ID NO: 25), the expression vector further comprising a multiple cloning site in which a second nucleic acid sequence encoding ~~said~~ a protein or

polypeptide of interest, having a carboxyl- and an amino-
20 terminus, is inserted in-frame with said first nucleic acid
sequence, wherein expression of the first and second
nucleic acid sequences yields a fusion protein consisting
of the encoded peptide extension fused to the carboxyl-
terminus of the protein or polypeptide of interest.

65 - 98: (cancelled)

99. (currently amended) An pET-type E. coli expression
vector for enhancing the solubility and proper folding of
an encoded protein or polypeptide of interest, which
protein or polypeptide comprises an amino and a carboxyl
terminus, said vector comprising a first nucleic acid
sequence encoding a peptide extension, which peptide
extension is selected from the group consisting of: Peptide
T7C (SEQ ID NO: 5), Peptide T7B (SEQ ID NO: 6), Peptide
T7B1 (SEQ ID NO: 7), Peptide T7B2 (SEQ ID NO: 8), Peptide
10 T7B3 (SEQ ID NO: 9), Peptide T7B5 (SEQ ID NO: 11), Peptide
T7B6 (SEQ ID NO: 12), Peptide T7B7 (SEQ ID NO: 13), Peptide
T7B8 (SEQ ID NO: 14), Peptide T7B9 (SEQ ID NO: 15), Peptide
T7B10 (SEQ ID NO: 16), Peptide T7B11 (SEQ ID NO: 17),

Peptide T7B12 (SEQ ID NO: 18), Peptide T7B13 (SEQ ID NO:
19), Peptide T7A1 (SEQ ID NO: 21), Peptide T7A2 (SEQ ID NO:
22), Peptide T7A3 (SEQ ID NO: 23), Peptide T7A4 (SEQ ID NO:
24) and Peptide T7A5 (SEQ ID NO: 25), a multiple cloning
site in which a second nucleic acid sequence encoding the
protein or polypeptide of interest is inserted in frame
20 with said first nucleic acid sequence, and wherein
expression of the first and second nucleic acid sequences
under physiological conditions yields a fusion protein
consisting of the encoded peptide extension fused to the
carboxyl terminus of the protein or polypeptide of
interest.

100. (cancelled)